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Supplementary information

Chloroplast SRP43 autonomously protects chlorophyll biosynthesis proteins against heat shock

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Chloroplast SRP43 autonomously protects chlorophyll biosynthesis proteins against heat shock

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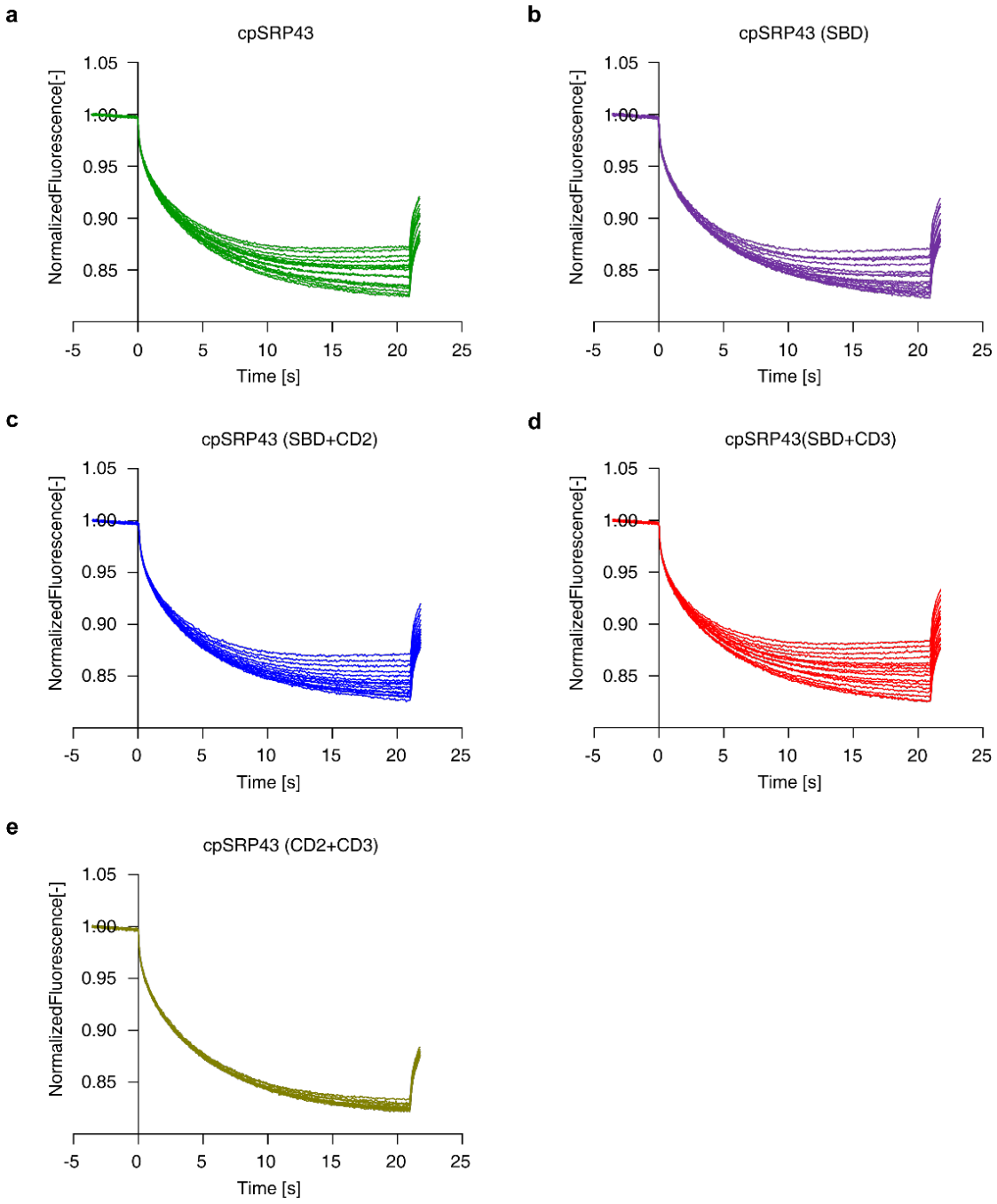
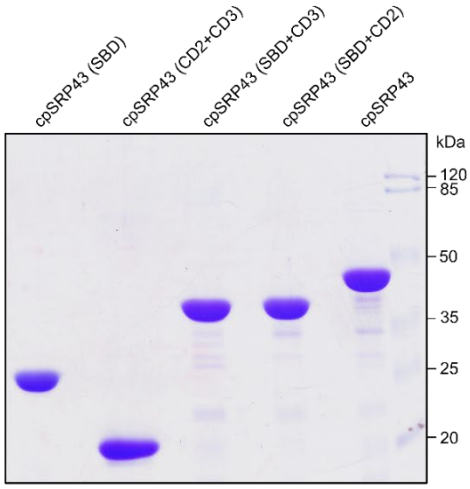


Supplementary Fig. 1. Raw MST data.

MST traces for the determination of the binding affinity of cpSRP43 with GUN4 refer to the binding curves shown in Extended Data Fig. 5. The recombinant proteins used for microscale thermophoresis are shown in Supplementary Fig. 2.



Supplementary Fig. 2. Coomassie stained SDS-PAGE gel of purified recombinant wild-type cpSRP43 and cpSRP43 truncation mutants used for the MST analyses.

The indicated recombinant His-tagged proteins were purified as described in the Methods. Three micrograms of each protein was analyzed by SDS-PAGE and stained with Coomassie Brilliant Blue.

Supplementary Table 1. List of primers used in this study.

qRT-PCR	Forward (5'-3')	Reverse(5'-3')
SAND	AACTCTATGCAGCATTTGATCCACT	TGATTGCATATCTTTATCGCCATC
GluTR	TTGCTGCCAACAAAGAAGAC	CCGTCTCCAATGAATCCCTC
CHLH	CTGGTCGTGACCCTAGAACAG	GATTGCCAGCTTCTTCTCTG
GUN4	TGATGGTAGATTCGGATACAGC	CAAGAAGCTTCATCCACTCAAC
cpSRP43	CTGCACATGGCGGCTGGTT	CGTCTTTGCCTTTCCCTCGTT
cpSRP54	GCTTCAGATAGATAAAGGCATG	GCACCACCTCTTGAATCACC
Plant transformation		
pGL1-cpSRP43	TCTAGAATGCAAAAGGTCTTCTTGG	CCCGGGTCACTTGTCATCATCGTCCTTGTAGTCTTCATTCATTGG
pGL1-cpSRP43ΔCD3	TCTAGAATGCAAAAGGTCTTCTTGG	CCCGGGTCACTTGTCATCATCGTCCTTGTAGTCAGCGTACTCCAG
Intermediate primers for cloning of truncated cpSRP43		
cpSRP43ΔCD1	CATCATCATCGTACGCTAGAAAAGCCG	TCGGCTTTTCTAGCGTACGATGATGATG
cpSRP43ΔAnk	CCCTGGTGGACGGCACAAGTGTTCGAGTAC	GTACTCGAACACTTGTGCCGTCCACCAGG
cpSRP43ΔCD2	CAAGTGTTCGAGTACGTAGCGGAGAGTGT	GTACTCGAACACTTGTCCTTCCAGG
BiFC constructs		
pDonor-cpSRP43	CAAAAAAGCAGGCTGAATGCAAAAGGTCTTCTT	CAAGAAAGCTGGGTGTTCATTCATTGGTTGTTGT
pDonor-GUN4	CAAAAAAGCAGGCTGAATGATGGCGACCA CAAAC	CAAGAAAGCTGGGTG GAAGCTGTAATTTGTTTT
Heterologous protein expression constructs		
pET28a-cpSRP43	GACATATGGCCGCCGTACAAAG	GCCTCGAGAGCGTACTCCAGCCCAT
pET28a-GluTR	ATCATATGGCTTCTTCTGATTCTGC	CTGAATTCTTACTTCTGTTGTTGTT